

**Tektronix, Inc.**



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# Your invitation to the Tektronix Instrument Display

## NEREM

Boston War Memorial Auditorium

**NOVEMBER 6-8**

BOOTHS 1H75 TO 1H79

### THE NEW TYPE 576 CURVE TRACER

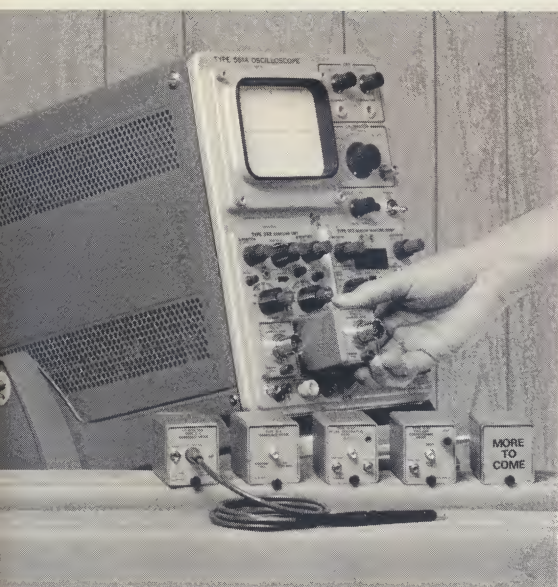
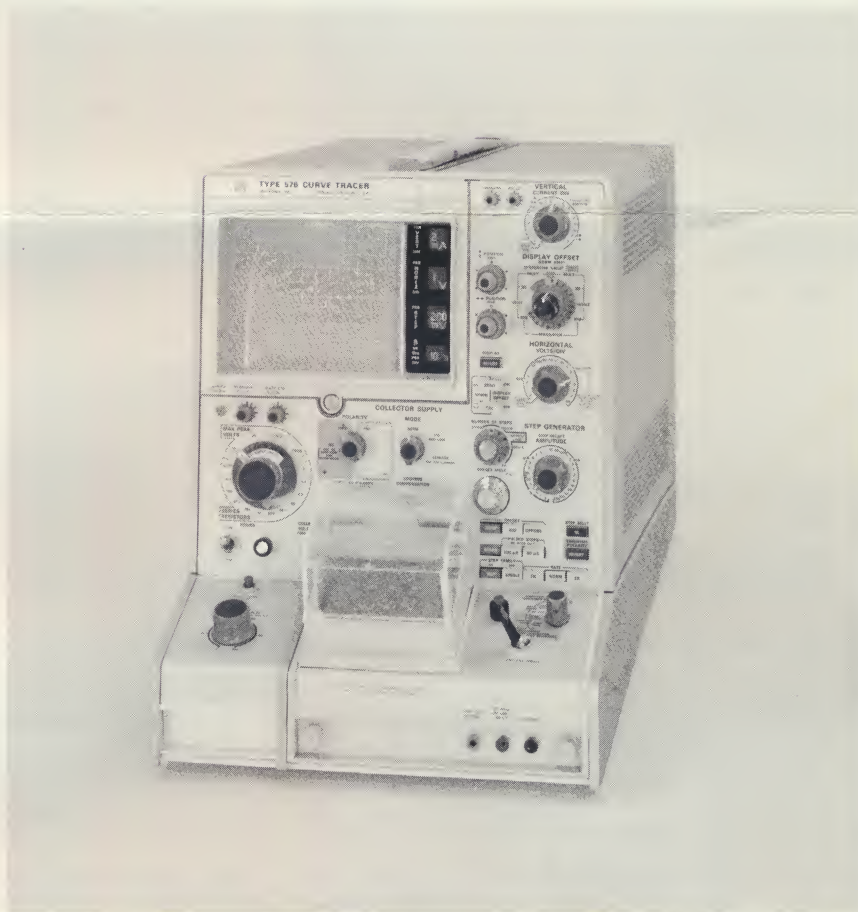
The Tektronix booth personnel will be prepared to fully introduce you to the unique new features incorporated in this instrument.

The improved areas of performance compared to existing curve tracers are: resolution, collector supply modes, pulsed base operation with fixed width, calibrated DC step offset, Kelvin contacts for high-current measurements, and a calibrated display offset with vertical or horizontal magnifier.

The very significant operational features include: Parameter readout, big 6½-inch CRT, multi-function switching, direct-reading power limits, and much more.

The demonstration at NEREM will show you these features with diode, transistor, and FET measurement situations to show the range of operation versatility.

TYPE 576 CURVE TRACER ..... \$2125.00



### 25-ps SAMPLING

Four new Sampling Heads expand the measurement capabilities of Tektronix Type 561A, 564, 567 and 568 Oscilloscopes, when used with the Type 3S2 Dual-Trace Sampling Plug-In Unit and Type 3T2 Random Sampling Sweep Unit.

Sampling Head S-4 features a risetime of 25 ps and a bandwidth of DC to 14 GHz. This 50-Ω unit increases detail and resolution for making fast pulse measurements.

Sampling Probe Head S-3 has a 350-ps risetime and an input impedance of 100 kΩ paralleled by 2.3 pF. It is designed to measure high-impedance signal sources and is easy to use when probing into miniature circuits.

Type S-50 Pulse-Generator Head has a 25-ps risetime and features high-resolution 25-ps TDR measurement when used with the S-4 Sampling Head.

Type S-51, a trigger countdown unit for 1 to 18 GHz, provides stable oscilloscope triggering to 18 GHz and displays to greater than 14 GHz with the S-4 Head.

The Type S-2 Sampling Head features a 50-ps risetime with a terminated 50-Ω input impedance and standard GR874 input connectors.

The Type S-1 Sampling Head is a 350-ps risetime, 50-Ω unit that features low displayed noise and an unexcelled transient response.

Type 561A .....	\$530	Type S-4 .....	\$750	Type S-1 .....	\$250
Type 3S2 .....	800	Type S-50 .....	450	Type S-2 .....	300
Type 3T2 .....	990	Type S-51 .....	425	Type S-3 .....	375





### TYPE S-3130 DIGITAL SYSTEM

The new Tektronix Type S-3130 Digital Measurement System is a dynamic measurement system intended for measuring performance of active devices under simulated operating conditions. It is designed to test integrated circuits, transistors, diodes, circuit modules, circuit boards, and sub-assemblies in all segments of the electronic industry. Typical areas of application are found in production testing, QC, incoming inspection and preproduction.

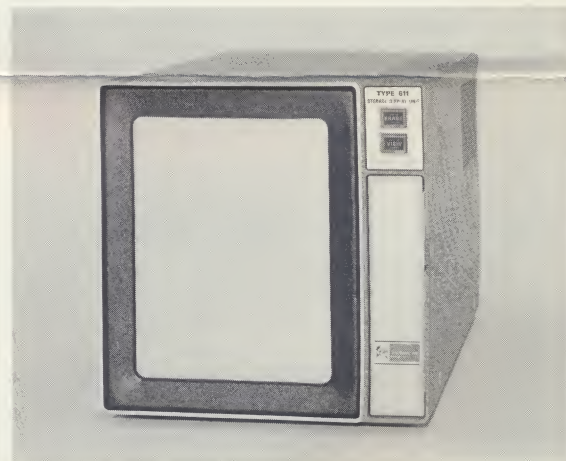
The Type S-3130 can sequence through measurements at a rate of 100 measurements per second. The Disc Memory provides local storage and random access to 1600 independent measurements, and permits sorting and classifying with diagnostic test routines.

The dynamic measurement capabilities of the Type S-3130 are as follows: risetime is less than or equal to 400 ps; bandwidth is equivalent to DC to 875 MHz; voltage measurements are from 20 mV to 16 volts; time measurements are from 100 ps to 5 seconds; digital sweep delay provides a wide measurement window; 4 power supplies are included (three 40 V, one 80 V); and a programmable pulse generator with risetime of 10 ns and rep rate of 10 MHz. Additional programmable pulse generators can be added to the Type S-3130. Type S-3130 Digital System—\$41,000

### INFORMATION DISPLAY UNIT

The Type 611 Storage Display Unit features a Tektronix-developed 11-inch magnetically deflected, bistable storage display tube. This new storage tube offers high information density and excellent resolution on a 21-cm x 16.3-cm display area. Alphanumeric and graphic information displays are presented without flicker or fade and without being refreshed. Resolution is 400 stored line pairs along the vertical axis and 300 stored line pairs along the horizontal axis. Dot settling time is  $3.5 \mu\text{s}/\text{cm} + 5 \mu\text{s}$ , and dot writing time is  $20 \mu\text{s}$ . Deflection factor for vertical and horizontal is 1-V full screen.

Operating functions are remotely programmable at a rear-panel connector by a contact closure to ground. Manual control of Erase and View is provided on the front panel. A "Write-Through" feature permits the operator to position the writing beam to any point on the display area without storing new information or destroying previously stored information. Type 611 Storage Display Unit—\$2500.



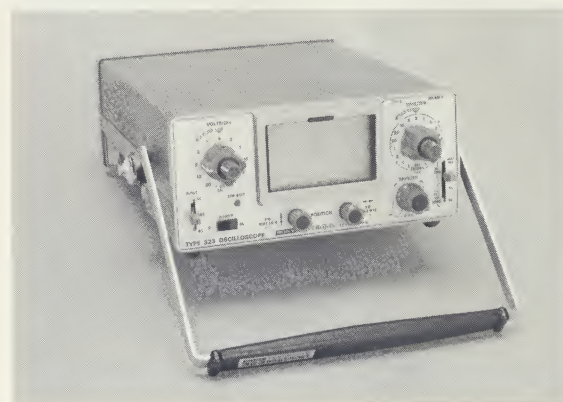
### SPLIT-SCREEN STORAGE OSCILLOSCOPE

Featuring calibrated sweep delay, full-bandwidth triggering, and versatility of all Letter-Series and "1" Series Plug-Ins (including sampling and spectrum analysis), the Type 549 combines performance with state-of-the-art storage previously unavailable in a laboratory oscilloscope. Separate controls for upper and lower screen areas permit simultaneous operation as a storage oscilloscope and conventional oscilloscope, for quick comparison with a stored reference display. The entire 6 x 10-cm viewing area can also be used conventionally or for storage. Enhanced writing speed is  $5 \text{ cm}/\mu\text{s}$ . Displays can be viewed up to one hour and erased in 150 ms (remote erase through rear-panel connector). Either or both screen areas can be erased automatically, at the end of each sweep or recurrently. End-of-sweep erase provides automatic single-sweep reset at the end of the selected viewing time (0.5 s to 5 s in either mode). Type 549 without plug-ins—\$2475.



### DC-TO-4 MHz PORTABLE OSCILLOSCOPE

The SONY®/TEKTRONIX® Type 323 is an all solid-state, single-channel, 4-MHz portable oscilloscope providing the operator the convenience of using AC, DC, or internal rechargeable batteries for powering the instrument. The Type 323 features small size and light weight, together with extremely low power consumption. Depth is  $10 \frac{5}{8}$  inches, width— $8 \frac{1}{2}$  inches, height— $4 \frac{1}{4}$  inches, weight— $\approx 7$  pounds. Power consumption is up to 4.5 watts, typically 1.6 watts from an external DC source and 14 watts when powered from the AC line. Internal rechargeable batteries will provide up to 8 hours continuous operation, sufficient for a full working day. The portability/performance provided by the Type 323 Oscilloscope makes it most attractive for use in "on-site" maintenance applications; for example, industrial control equipment, communication systems, business machines, and computers. Type 323 with batteries—\$850.





## 10 MHz-to-40 GHz SPECTRUM ANALYZER

The Type 491 is a precision, wide-band spectrum analyzer designed for rugged environmental conditions and mobility. Measuring only 7 1/8 inches x 12 3/8 inches x 21 5/8 inches overall (including handle, feet and front cover), the Type 491 forms an easy-to-carry package weighing less than 40 pounds complete with accessories.

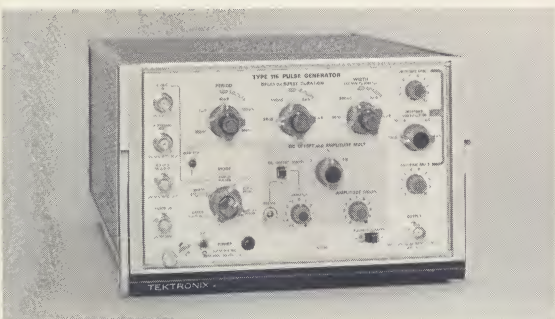
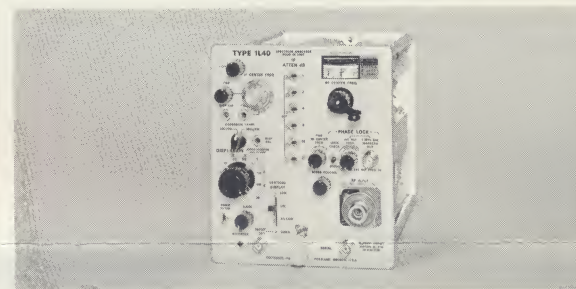
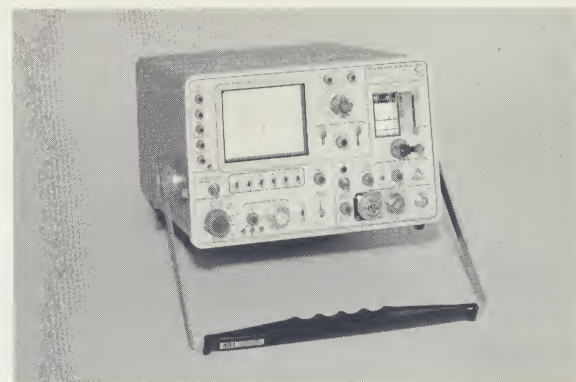
In spite of its small size, it is completely self-contained, has internal phase lock, calibrated dispersion to 100 MHz, coupled resolution,  $\pm 1.5$ -dB display flatness to 12.4 GHz, plus oscilloscope-type time-base and trigger circuits, 8 x 10-div (each div = 0.8 cm) CRT with P7 phosphor and internal graticule. The Type 491 has the high performance needed for most 10 MHz to 40 GHz applications. Setup is easy even at waveguide frequencies—just mount one of the external waveguide mixers to the source and couple it to the Type 491 with a flexible cable.

Type R491 requires only 7 in of rack height. Power consumption for both instruments is 55 W maximum. Type 491—\$4400, Type R491—\$4500.

## SPECTRUM ANALYZER UNIT

The Type 1L40 extends the range of Tektronix Plug-in Spectrum Analyzers to 40 GHz. The standard coaxial mixer operates from 1.5 GHz to 12.4 GHz. Three waveguide mixer/adaptor combinations for frequencies from 12.4 GHz to 40 GHz are available as OPTIONAL accessories.

Other features include internal phase lock, calibrated dispersion, 1-kHz resolution, and use in an oscilloscope main frame with a linear time base and triggering for direct PRF measurements. Type 1L40 Spectrum Analyzer Unit—\$2150.



## MULTI-PURPOSE PULSE GENERATOR

The Type 115 is a 100 Hz to 10 MHz, -10 volts to +10 volts general-purpose pulse generator with separately variable risetime, falltime, width, delay, period, amplitude and baseline offset. It is intended for use in applications where a variety of pulse amplitudes, polarities, shapes and other characteristics are required.

This multi-purpose pulse generator provides five operating modes: gated, burst, paired pulses, delayed pulse, and undelayed pulse. Type 115 Pulse Generator \$825

## TYPES ALSO ON DISPLAY

- 1A7A High-Gain DC Differential Unit
- 1S1 Wide-Band Sampling Unit
- 1L5 50 Hz-to-1 MHz Spectrum Analyzer Unit
- 1L20 10 MHz-to-4.2 GHz Spectrum Analyzer Unit
- 114 Pulse Generator
- 3S1 350-ps Dual-Trace Sampling Unit
- 3T77A Sampling Sweep Unit
- Cameras—For Trace Recording
- 564 Storage Oscilloscope
- 568 Readout Oscilloscope
- 230 Digital Unit
- 285 Power Supply
- 454 DC-to-150 MHz Portable Oscilloscope
- 547 DC-to 50-MHz Oscilloscope
- 1A4 DC-to-50 MHz Four-Channel Amplifier
- 1A5 DC-to-50 MHz Differential Amplifier

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# NOTES

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